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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,037	11/14/2003	Thomas A. Knotts	10030689-1	1397

57299 7590 05/17/2007

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EXAMINER	
BOLOURCHI, NADER	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
05/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/714,037	KNOTTS, THOMAS A.	
	Examiner	Art Unit	
	Nader Bolourchi	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/14/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,9,10,12,18,19 and 24* is/are rejected.

7)☒ Claim(s) *3, 6-8, 11, 13-17, 20-23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 11/14/2003 and 03/14/2005 have been considered and made of record by the examiner.

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 18 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18 and 24 recites "logic in signal communication with said counter" (lines 2-3), which term "signal communication" makes it vague and unclear. It is not clear what term "signal communication" is referring to.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1, 5, 10, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Onishi et al. (US 2002/0018038).

Regarding claim 1, Onishi et al. disclose establishing a preset value (par. 64; examiner notes that the H counter reset value is a preset value); presetting a counter value to said preset value (Fig.3: 62; par. 64: H counter recited in par 64); changing said counter value from said preset value in response to a voltage controlled oscillator (VCO) signal (Fig. 3: output of VCO 53 is connected to input of H Counter 62; par. 81: counting sampling clock outputted from VCO 53) over a known time period (Fig. 3: 72; par. 81: predetermined period width of Reference clock); and obtaining frequency information related to said VCO signal from said counter value (par. 82: the frequency of the sampling clocks is found from the count value and the reference clock signal) at the end of said known time period.

Regarding claim 5, Onishi et al. disclose as stated in rejection of claim 1 above. Onishi et al. also disclose that said frequency information to control the frequency of said VCO signal. (par. 82: the frequency of the sampling clocks is found from the count value and the reference clock signal,; Fig: 3: 53 VCO is controlled through 51)

Regarding claim 10, Onishi et al. disclose a counter configured to receive: a voltage controlled oscillator (VCO) signal (Fig. 3: output of VCO 53 is connected to input of H Counter 62; par. 81: counting sampling clock outputted from VCO 53); and a preset

value (par. 64; examiner notes that the H counter reset value is a preset value); and a controller operable to control said counter (Fig. 3: 61; par. 64); wherein said counter is operable to output frequency information related to said VCO signal in response to said controller, said VCO signal, and said preset value (par. 82: the frequency of the sampling clocks is found from the count value and the reference clock signal).

Regarding claim 19, Onishi et al. disclose a voltage controlled oscillator (VCO) (fig. 3: 53); and a frequency detector in signal communication with said VCO (Fig. 3: combination of 51 and 62), said frequency detector including: a counter configured to receive: a VCO signal from said VCO (Fig. 3: output of VCO 53 is connected to input of H Counter 62; par. 81: counting sampling clock outputted from VCO 53) and a preset value (par. 64; examiner notes that the H counter reset value is a preset value); and a controller operable to control said counter (Fig. 3: 61; par. 64); wherein said counter generates frequency information related to said VCO signal in response to said controller, said VCO signal, and said preset value (par. 82: the frequency of the sampling clocks is found from the count value and the reference clock signal).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 4, 9, 12, 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi et al. (US 2002/0018038).

Regarding claim 2, Onishi et al. disclose as stated in rejection of claim 1 above. Onishi et al. does not disclose the preset value is programmable over a range of values. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a programmable counter since it was known in the art that it allows to program the counter reset value to any arbitrary value within a range. Furthermore, Examiner notes that since applicant has not disclosed that this difference solves any stated problem or is for any particular purpose.

Regarding claim 4, Onishi et al. disclose as stated in rejection of claim 2 above. Onishi et al. also disclose measuring said known time period using a reference clock signal (Fig. 3: 71).

Regarding claim 9, Onishi et al. disclose as stated in rejection of claim 1 above. Onishi et al. does implicitly disclose selecting one of multiple different charging currents in response to said frequency information (loop filter Fig. 3: 52 receive different charging current in response to frequency information from Fig3: 72 through Fig. 3: 73, 74, and 51).

Regarding claim 12, Onishi et al. disclose as stated in rejection of claim 10 above. . Onishi et al. does not disclose the preset value is programmable over a range of values. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a programmable counter since it was known in the art that it allows to program the counter reset value to any arbitrary value within a range. Furthermore, Examiner notes that since applicant has not disclosed that this difference solves any stated problem or is for any particular purpose.

Regarding claim 18, Onishi et al. disclose as stated in rejection of claim 10 above. . Onishi et al. does implicitly disclose the counter for providing different charging currents dependent on said frequency information (loop filter Fig. 3: 52 receive different charging current in response to frequency information from Fig3: 72 through Fig. 3: 73, 74, and 51).

Regarding claim 24, Onishi et al. disclose as stated in rejection of claim 19 above. . Onishi et al. does implicitly disclose said counter for providing different charging currents to said loop filter dependent on said frequency information from said counter (Fig. 3: 52 receive different charging current in response to frequency information from Fig3: 72 through Fig. 3: 73, 74, and 51).

Allowable Subject Matter

5. Claims 3, 6-8, 11, 13-17, and 20-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Remarks

7. No claim is allowed.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. ***.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nader Bolourchi whose telephone number is (571) 272-8064. The examiner can normally be reached on M-F 8:30 to 4:30.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David. C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Nader Bolourchi
5/11/2007
Art Unit 2611

David C. Payne

DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER